

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

- 1 1. (Currently Amended) A server for a merchant computer
2 system, the server comprising:
3 a file store configured to store a range of audio/video
4 products in respective product files and client history data, the
5 client history data including a personal client file for
6 individually identified clients storing past purchasing records of
7 the client;
8 a dialogue unit operable to invite and receive a client
9 selection from among the products, to identify a personal client
10 file corresponding to the client, and to define a degrade level
11 signal dependent upon ~~a client integrity indicator determined from~~
12 a the identified personal client file containing client history
13 data stored in the file store;
14 a product reader connected to read the product files from
15 the file store to generate a digital audio/video signal; and
16 a signal processing unit having an input selectively
17 connectable to receive the digital audio/video signal from the
18 product reader, a processing core operable to apply a defined level
19 of content degradation to the digital audio/video signal creating a
20 degraded digital audio/video signal having a degradation in
21 perceived quality corresponding to the defined degrade level signal
22 of the dialogue unit, and an output connected to output the
23 degraded digital audio/video signal.

Claims 2 to 34. (Canceled)

- 1 35. (Currently Amended) A method of operating a server of a
2 merchant computer system, the method comprising:

3 inviting a client to make a selection from a range of
4 audio/video products stored by the server in product files;
5 receiving a client selection for evaluation of one of the
6 products;
7 reading the selected product file to generate a digital
8 audio/video signal;
9 storing client history data including a personal client
10 file for individually identified clients storing past purchasing
11 records of the client;
12 identifying a personal client file corresponding to the
13 client;
14 defining a level of content degradation dependent on a
15 ~~client integrity indicator determined from a~~ the identified
16 personal client file containing client history data;
17 applying the defined level of content degradation to the
18 digital audio/video signal to generate a degraded digital
19 audio/video signal having a degradation in perceived quality
20 corresponding to said defined level of content degradation; and
21 outputting the degraded digital audio/video signal to the
22 client.

Claim 36. (Canceled)

1 37. (Currently Amended) A method of operating a server of a
2 merchant computer system, the method comprising:
3 inviting a client to make a selection from a range of
4 audio/video products stored by the server in product files;
5 receiving a client selection for evaluation of one of the
6 products;
7 reading the selected product file to generate a digital
8 audio/video signal;

9 defining a level of content degradation dependent on an
10 authorization response received by the server from a remote payment
11 gateway computer system following an authorization request by the
12 server including a client i.d., a client payment instrument and a
13 monetary value of the product selected for evaluation by
14 the server transmitting to the client a request for
15 identification of type of payment authorization,
16 the client transmitting to the server identification of a
17 type of payment authorization selected from among a plurality
18 of differing types of payment authorizations,
19 defining at the server a level of content degradation as
20 a function of the identified type of payment authorization;
21 applying the defined level of content degradation to the
22 digital audio/video signal to generate a degraded digital
23 audio/video signal having a degradation in perceived quality
24 corresponding to said defined level of content degradation; and
25 outputting the degraded digital audio/video signal to the
26 client.

1 38. (Original) A method according to claim 35, utilizing a
2 digital signal processor to apply the defined level of content
3 degradation to the digital data stream.

1 39. (Currently Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:

4 a) the server storing client history data including a
5 personal client file for individually identified clients storing
6 past purchasing records of the client;

7 ~~a~~ b) the client establishing communication with the
8 server to identify the client and a client payment instrument to
9 the server;

10 c) the server identifying a personal client file
11 corresponding to the client;
12 ~~b~~ d) the server transmitting to the client a range of
13 audio/video products for supply in return for payment;
14 ~~e~~ e) the client transmitting to the server an evaluation
15 request for one of the products;
16 ~~f~~ f) the server and gateway communicating to obtain
17 payment authorization for the requested product from the payment
18 instrument;
19 ~~g~~ g) the server defining a level of content degradation
20 as a function of client history stored in the identified personal
21 client file;
22 ~~h~~ h) the server transmitting to the client a degraded
23 evaluation version of the selected product without payment
24 authorization, the degraded evaluation version of the selected
25 product having a degraded perceived quality corresponding to the
26 level of content degradation;
27 ~~i~~ i) the client transmitting to the server a payment
28 decision;
29 ~~j~~ j) the server and gateway communicating to effect
30 payment capture for the authorized payment; and
31 ~~k~~ k) the server transmitting to the client a non-degraded
32 version of the selected product.

40. (Canceled)

1 41. (Currently Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:

4 a) the client establishing communication with the server to
5 identify the client and a client payment instrument to the server,

6 the client payment instrument selected from among a plurality of
7 differing types of client payment instruments;
8 b) the server transmitting to the client a range of
9 audio/video products for supply in return for payment;
10 c) the client transmitting to the server an evaluation
11 request for one of the products;
12 d) the server and gateway communicating to obtain payment
13 authorization for the requested product from the payment
14 instrument;
15 e) the server defining a level of content degradation as a
16 function of said client payment instrument;
17 f) the server transmitting to the client a degraded
18 evaluation version of the selected product without payment
19 authorization, the degraded evaluation version of the selected
20 product having a degraded perceived quality corresponding to the
21 level of content degradation;
22 g) the client transmitting to the server a payment decision;
23 h) the server and gateway communicating to effect payment
24 capture for the authorized payment; and
25 i) the server transmitting to the client a non-degraded
26 version of the selected product.

1 42. (Currently Amended) A server apparatus comprising:
2 means for supplying a range of audio/video products as
3 respective digital audio/video signals;
4 means for storing client history data including a
5 personal client file for individually identified clients storing
6 past purchasing records of the client;
7 means for inviting and receiving a client selection from
8 among the products via a network connection;
9 means for identifying a personal client file
10 corresponding to the client;

11 means for defining a level of content degradation as a
12 function of ~~client history~~ the identified personal client file;
13 means for processing the digital audio/video signal
14 associated with the selected product to apply the defined level of
15 content degradation thereto; and
16 means for outputting the degraded digital audio/video
17 signal to the network connection, the degraded digital audio/video
18 signal having a degraded perceived quality corresponding to the
19 defined level of content degradation, whereby a degraded version of
20 the selected product is supplied to the client.

1 43. (Currently Amended) A merchant computer system comprising
2 a server and a client interconnectable over a network, wherein the
3 server comprises:

4 a file store configured to store a range of audio/video
5 products in respective product files and client history data, the
6 client history data including a personal client file for
7 individually identified clients storing past purchasing records of
8 the client;

9 a dialogue unit having a network connection and operable
10 to invite and receive a client selection from among the products
11 via the network connection, to identify a personal client file
12 corresponding to the client, and to define a level of content
13 degradation dependent upon ~~a client integrity indicator determined~~
14 ~~from a~~ the personal client file containing client history data
15 stored in the file store;

16 a product reader connected to read the product files from
17 the file store to generate a digital audio/video signal; and

18 a signal processing unit having an input connectable to
19 receive the digital audio/video signal from the product reader, a
20 processing core operable to apply a defined level of content
21 degradation to the digital audio/video signal creating a degraded

22 digital audio/video signal having a degradation in perceived
23 quality corresponding to said defined level of content degradation
24 of the dialogue unit, and an output connected to output the
25 degraded digital audio/video signal from the processing core to the
26 network connection.

1 44 (Original) The system of claim 43, wherein the client
2 comprises an audio/video reproduction system operable to play the
3 audio/video product communicated by way of the digital audio/video
4 signal.

1 45. (Original) The system of claim 43, the server further
2 including an output stage operatively arranged between the output
3 of the signal processing unit and the network connection, the
4 output stage having a packetizer for sub-dividing the degraded
5 digital audio/video signal into encrypted data packets and
6 associating decryption keys with each encrypted data packet, the
7 dialogue unit being operable to supply a packet decoder to the
8 client over the network for decoding the digital video/audio
9 signal, and wherein the client includes an input stage connected to
10 receive the packet decoder and load the packet decoder into a
11 decoder host, the client input stage further comprising an input
12 connected to receive the data packets and supply the data packets
13 to the decoder host for packetwise decoding by applying the packet
14 decoder with the associated decryption key of the data packet
15 concerned, wherein the client input stage is configured to corrupt
16 the decryption key of any given data packet before the decoded data
17 of that packet is transmitted from the input stage in a form
18 playable by the reproduction system.

1 46. (Currently Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:
4 a) the server storing client history data including a
5 personal client file for individually identified clients storing
6 past purchasing records of the client;
7 ~~a~~ b) the client establishing communication with the
8 server to identify the client;
9 c) the server identifying a personal client file
10 corresponding to the client;
11 ~~b~~ d) the server transmitting to the client a range of
12 audio/video products for supply in return for payment;
13 ~~e~~ e) the client transmitting to the server an evaluation
14 request for one of the products;
15 f) the server defining a level of content degradation as a
16 function of client history stored in the identified personal client
17 file;
18 ~~d~~ g) the server transmitting to the client a degraded
19 evaluation version of the selected product without payment
20 authorization, the degraded evaluation version of the selected
21 product having a degraded perceived quality corresponding to the
22 level of content degradation;
23 ~~e~~ h) performing steps ~~b~~ d) through ~~d~~ g) at least once;
24 ~~f~~ i) the client transmitting to the server a purchase
25 decision and payment instrument;
26 ~~g~~ j) the server and gateway communicating to obtain
27 payment authorization for the requested product from the payment
28 instrument;
29 ~~h~~ k) the server and gateway communicating to effect
30 payment capture for the authorized payment; and
31 ~~i~~ l) the server transmitting to the client a non-degraded
32 version of the selected product.

Claims 47 and 48. (Canceled)

1 49. (Previously Presented) The method of claim 35, wherein:
2 said step of applying a defined level of content degradation
3 includes inserting noise into the digital audio/video signal to
4 degrade signal quality.

1 50. (Previously Presented) The method of claim 35, wherein:
2 said step of applying a defined level of content degradation
3 includes:
4 performing a discrete Fourier transform on the digital
5 audio/video signal to obtain a frequency domain representation
6 of the digital audio/video signal;
7 frequency modulating the frequency domain representation
8 of the digital audio/video signal; and
9 performing an inverse discrete Fourier transform unit on
10 the frequency modulated frequency domain representation of the
11 digital audio/video signal to reconstruct a time domain
12 representation of the digital audio/video signal;
13 wherein the frequency modulating effects a degradation of
14 perceived signal quality in the reconstructed digital audio/video
15 signal.

1 51. (Previously Presented) The method of claim 50, wherein:
2 said step of frequency modulating includes one or more of the
3 following frequency band rejection, frequency low pass filtering
4 and frequency high pass filtering to effect a degradation of
5 perceived signal quality.

1 52. (Currently Amended) The method of claim 50, wherein:
2 said step of frequency modulating includes phase inversion
3 over at least one range of frequency components to degrade signal
4 quality.

1 53. (Currently Amended) The method of claim 50, wherein:
2 said digital audio/video signal includes a digital audio
3 signal; and
4 said step of frequency modulating includes inserting masked
5 sound contributions adjacent amplitude peaks of the frequency
6 domain representation of the digital audio signal to degrade signal
7 quality.

1 54. (Previously Presented) The method of claim 50, further
2 including the step of:
3 mixing a signal with the digital audio/video signal before
4 performing the discrete Fourier transform to effect a degradation
5 of perceived signal quality.

1 55. (Previously Presented) The method of claim 54, further
2 comprising:
3 frequency modulating the digital audio/video signal following
4 mixing and before the performing the inverse discrete Fourier
5 transform, the frequency modulating including band-pass filtering
6 to suppress frequency contributions lying outside a selected
7 frequency range to effect a degradation of perceived signal
8 quality.

1 56. (Currently Amended) The method of claim 55, wherein:
2 said frequency modulating includes inserting masked sound
3 contributions adjacent the mixing frequency to degrade signal
4 quality.

1 57. (Previously Presented) The method of claim 35, wherein:
2 the digital audio/video signal includes a digital video
3 signal;
4 the method further comprising:
5 holding frames of the digital video signal in a frame buffer;
6 and
7 manipulating frames held in the frame buffer to generate a
8 degraded digital video signal.

1 58. (Previously Presented) The method of claim 57, wherein:
2 the digital video signal consists of an MPEG standard video
3 signal including as frame types I-frames, P-frames and B-frames;
4 and
5 wherein said step of manipulating frames includes
6 identifying the frame type of frames held in the frame
7 buffer, and
8 performing frame manipulation of held frames according to
9 frame type so as to effect a degradation of perceived video
10 signal quality.

1 59. (Previously Presented) The method of claim 57, wherein:
2 the digital video signal consists of an MPEG standard video
3 signal including data blocks, each comprising a plurality of
4 pixels; and
5 wherein said step of manipulating frames includes varying the
6 pixels of the data blocks of at least selected ones of held frames
7 so as to effect a degradation of perceived video signal quality.

1 60. (Previously Presented) The method of claim 57, wherein:
2 the digital video signal includes an MPEG standard video
3 signal including motion vectors; and

4 wherein said step of manipulating frames includes varying the
5 motion vectors of at least selected ones of the held frames so as
6 to effect a degradation of perceived video signal quality.

1 61. (Previously Presented) The method of claim 57, wherein:
2 the digital video signal consists of an MPEG standard video
3 signal including objects; and
4 wherein said step of manipulating frames includes manipulating
5 the objects of at least selected ones of the held frames so as to
6 effect a degradation of perceived video signal quality.

1 62. (Previously Presented) The method of claim 35, wherein:
2 said digital audio/video signal includes a multi-channel
3 digital audio signal; and
4 said step of applying the defined level of content degradation
5 includes switching individual channels within the multi-channel
6 digital audio signal to apply spatial modification to the digital
7 audio signal so as to effect a degradation of perceived digital
8 audio signal quality.

1 63. (Previously Presented) The method of claim 35, wherein:
2 said digital audio/video signal includes a multi-channel
3 digital audio signal; and
4 said step of applying the defined level of content degradation
5 includes inverting the phase of at least one of the channel of the
6 multi-channel digital audio signal so as to effect a degradation of
7 perceived digital audio signal quality.

1 64. (Previously Presented) The method of claim 35, wherein:
2 said digital audio/video signal includes a multi-channel
3 digital audio signal; and

4 said step of applying the defined level of content degradation
5 includes adding together individual ones of the channels of the
6 multi-channel digital audio signal so as to effect a degradation of
7 perceived digital audio/video signal quality.

1 65. (Previously Presented) The method of claim 35, wherein:
2 said digital audio/video signal includes a multi-channel
3 digital audio signal; and
4 said step of applying the defined level of content degradation
5 includes at least one of removing or attenuating of at least one of
6 the channels of the multi-channel audio signal so as to effect a
7 degradation of perceived digital audio/video signal quality.

1 66. (Previously Presented) The method of claim 35, wherein:
2 the digital audio/video signal includes an n-bit digital audio
3 signal; and
4 said step of applying the defined level of content degradation
5 includes converting the n-bit digital audio signal into an m-bit
6 digital audio signal where m is less than n so as to effect a
7 degradation of perceived digital audio signal quality.

1 67. (Previously Presented) The method of claim 35, wherein:
2 said step of applying the defined level of content degradation
3 includes time modulating the digital audio/video signal so as to
4 effect a degradation of perceived digital audio signal quality.

1 68. (Currently Amended) The method of claim 67, wherein:
2 said step of time modulating the digital audio/video signal to
3 degrade signal quality includes at least one of:
4 speeding-up or slowing-down the digital audio/video
5 signal;

6 changing in the value of data bits in volume, luminance
7 or chrominance data contained within the digital audio/video
8 signal; and
9 lengthening of a sampling period of the digital
10 audio/video signal.

1 69. (Previously Presented) The method of claim 35, wherein:
2 said step of applying the defined level of content degradation
3 includes
4 converting the digital audio/video signal into an analog
5 audio/video signal,
6 analog processing the analog audio/video signal creating
7 a degraded analog audio/video signal having a degradation in
8 perceived quality corresponding to said defined level of
9 content degradation, and
10 converting the degraded analog signal into a degraded
11 digital audio/video signal for output.

1 70. (Previously Presented) The method of claim 69, wherein:
2 the analog audio/video signal includes an analog audio signal;
3 and
4 said step of analog processing includes frequency domain
5 modulating the analog audio signal so as to effect a degradation of
6 perceived audio signal quality.

1 71. (Currently Amended) The method of claim ~~71~~ 70, wherein:
2 said step of frequency domain modulating includes one or more
3 of band-reject filtering, low-pass filtering, high-pass filtering
4 and frequency-selective phase inversion to effect a degradation of
5 perceived audio signal quality.

1 72. (Previously Presented) The method of claim 35, wherein:
2 said step of applying the defined level of content degradation
3 includes adding a secondary signal to the digital audio/video
4 signal so as to effect a degradation of perceived digital
5 audio/video signal quality.

1 73. (Currently Amended) The method of claim 72, further
2 comprising:
3 generating said secondary signal to degrade signal quality.

1 74. (Currently Amended) The method of claim 73, wherein:
2 said step of generating said secondary signal generates a
3 noise signal to degrade signal quality.

1 75. (Currently Amended) The method of claim 73, wherein:
2 said step of generating said secondary signal generates a
3 content-based audio signal to degrade signal quality.

1 76. (Currently Amended) The method of claim 35, wherein:
2 said step of adding a secondary signal to the digital
3 audio/video signal selects a level of the added secondary signal
4 determined by said level of content degradation to degrade signal
5 quality.

1 77. (New) The server of claim 1, wherein:
2 the file store stores client history data whereby the
3 personal client file stores data indicative of a record of prior
4 purchases of audio/video products following output of a degraded
5 digital audio/video signal by said signal processing unit; and
6 said dialogue unit is further operable to define the
7 degrade level dependent upon the record of prior purchases of
8 audio/video products.

1 78. (New) The server of claim 77, wherein:
2 said dialogue unit is further operable to define the
3 degrade level at a first degrade level for clients whose record of
4 prior purchases of audio/video products following output of a
5 degraded digital audio/video signal by said signal processing unit
6 is high, at a second degrade level higher than the first degrade
7 level for clients whose record of prior purchases of audio/video
8 products following output of a degraded digital audio/video signal
9 by said signal processing unit is low, and at a third degrade level
10 intermediate between the first degrade level and the second degrade
11 level for new clients without a record of prior purchases.

1 79. (New) The method of claim 35, wherein:
2 the step of storing client history data stores client
3 history data whereby the personal client file stores data
4 indicative of a record of prior purchases of audio/video products
5 following output of a degraded digital audio/video signal by said
6 signal processing unit; and
7 said step of defining a level of content degradation
8 defines the degrade level dependent upon the record of prior
9 purchases of audio/video products.

1 80. (New) The method of claim 79, wherein:
2 said step of defining a level of content degradation
3 further defines the degrade level at a first degrade level for
4 clients whose record of prior purchases of audio/video products
5 following output of a degraded digital audio/video signal by said
6 signal processing unit is high, at a second degrade level higher
7 than the first degrade level for clients whose record of prior
8 purchases of audio/video products following output of a degraded
9 digital audio/video signal by said signal processing unit is low,

10 and at a third degrade level intermediate between the first degrade
11 level and the second degrade level for new clients without a record
12 of prior purchases.

1 81. (New) The method of claim 37, wherein:
2 the plurality of differing types of payment authorizations
3 includes at least one selected from the group consisting of credit
4 card, debit card, electronic cash, electronic check and smart card.

1 82. (New) The method of claim 39, wherein:
2 the step of the server storing client history data stores
3 client history data whereby the personal client file stores data
4 indicative of a record of prior purchases of audio/video products
5 following output of a degraded digital audio/video signal by said
6 signal processing unit; and
7 said step of the server defining a level of content
8 degradation defines the degrade level dependent upon the record of
9 prior purchases of audio/video products.

1 83. (New) The method of claim 82, wherein:
2 said step of the server defining a level of content
3 degradation further defines the degrade level at a first degrade
4 level for clients whose record of prior purchases of audio/video
5 products following output of a degraded digital audio/video signal
6 by said signal processing unit is high, at a second degrade level
7 higher than the first degrade level for clients whose record of
8 prior purchases of audio/video products following output of a
9 degraded digital audio/video signal by said signal processing unit
10 is low, and at a third degrade level intermediate between the first
11 degrade level and the second degrade level for new clients without
12 a record of prior purchases.

1 84. (New) The method of claim 41, wherein:
2 the plurality of differing types of payment authorizations
3 includes at least one selected from the group consisting of credit
4 card, debit card, electronic cash, electronic check and smart card.

1 85. (New) The server apparatus of claim 42, wherein:
2 the means for storing client history data whereby the
3 personal client file stores data indicative of a record of prior
4 purchases of audio/video products following output of a degraded
5 digital audio/video signal to the network connection; and
6 the means for defining a level of content degradation
7 defines the degrade level dependent upon the record of prior
8 purchases of audio/video products.

1 86. (New) The server of claim 85, wherein:
2 means for defining a level of content degradation defines
3 the degrade level at a first degrade level for clients whose record
4 of prior purchases of audio/video products following output of a
5 degraded digital audio/video signal to the network connection is
6 high, at a second degrade level higher than the first degrade level
7 for clients whose record of prior purchases of audio/video products
8 following output of a degraded digital audio/video signal to the
9 network connection is low, and at a third degrade level
10 intermediate between the first degrade level and the second degrade
11 level for new clients without a record of prior purchases.

1 87. (New) The merchant computer system of claim 43, wherein:
2 the file store stores client history data whereby the
3 personal client file stores data indicative of a record of prior
4 purchases of audio/video products following output of a degraded
5 digital audio/video signal by said signal processing unit; and

6 the dialogue unit is further operable to define the
7 degrade level dependent upon the record of prior purchases of
8 audio/video products.

1 88. (New) The merchant computer system of claim 87, wherein:
2 said dialogue unit is further operable to define the
3 degrade level at a first degrade level for clients whose record of
4 prior purchases of audio/video products following output of a
5 degraded digital audio/video signal by said signal processing unit
6 is high, at a second degrade level higher than the first degrade
7 level for clients whose record of prior purchases of audio/video
8 products following output of a degraded digital audio/video signal
9 by said signal processing unit is low, and at a third degrade level
10 intermediate between the first degrade level and the second degrade
11 level for new clients without a record of prior purchases.

1 89. (New) The method of claim 46, wherein:
2 the step of the server storing client history data stores
3 client history data whereby the personal client file stores data
4 indicative of a record of prior purchases of audio/video products
5 following output of a degraded digital audio/video signal by said
6 signal processing unit; and
7 said step of the server transmitting to the client a
8 degraded evaluation version of the selected product defines a
9 degrade level dependent upon the record of prior purchases of
10 audio/video products.

1 90. (New) The method of claim 89, wherein:
2 said step of the server transmitting to the client a
3 degraded evaluation version of the selected product further defines
4 the degrade level at a first degrade level for clients whose record
5 of prior purchases of audio/video products following output of a

6 degraded digital audio/video signal by said signal processing unit
7 is high, at a second degrade level higher than the first degrade
8 level for clients whose record of prior purchases of audio/video
9 products following output of a degraded digital audio/video signal
10 by said signal processing unit is low, and at a third degrade level
11 intermediate between the first degrade level and the second degrade
12 level for new clients without a record of prior purchases.